General

Guideline Title

Guideline for patient information management.

Bibliographic Source(s)

Giarrizzo-Wilson S, Conner RL. Guideline for patient information management. In: 2016 Guidelines for Perioperative Practice. Denver (CO): Association of periOperative Registered Nurses (AORN); 2016 Jul. p. e1-e26. [274 references]

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Recommendations

Major Recommendations

Note from the Association of periOperative Registered Nurses (AORN): The original guideline document provides guidance to assist perioperative nurses in documenting and managing patient care information within the perioperative practice setting. Highly reliable data collection is not only necessary to chronicle the patient's response to nursing interventions, but also to demonstrate the health care organization's progress toward improving health care outcomes. Health care data collection and retention is rapidly transitioning from traditional paper formats to standardized electronic applications that incorporate criteria from statutes and regulations, accreditation requirements, and standards-setting bodies. Whether patient data are captured using paper or electronic formats, the nursing process should be completed for each surgical or procedural intervention performed.

I. As part of the legal health record, the perioperative patient health care record should reflect the plan of care, including assessment, nursing diagnosis, outcome identification, planning, implementation of interventions, and evaluation of progress toward the expected outcome ("Standards," 2015; "ANA principles," 2010; "Nursing: scope," 2010; Peterson, 2013).
II. Perioperative nursing documentation should be synchronized with the nursing workflow (Whittenburg, 2010; Lee & McElmurry, 2010; Better EHR, 2014; Colligan et al., 2015).
III. Electronic perioperative nursing documentation should use the Perioperative Nursing Data Set (PNDS) and other structured vocabularies inclusive of the nursing process workflow with discrete representation of each phase of the perioperative patient care continuum (i.e., preadmission, preoperative, intraoperative, postoperative) (Hayrinen, Lammintakanen, & Saranto, 2010; Kim et al., 2009; Lundberg et al., 2008).
IV. Perioperative nursing documentation should be structured to meet professional and regulatory compliance requirements for a comprehensive representation of patient care (42 CFR §416.47, 2007; 42 CFR §482, 2011; 42 CFR §482.24, 2011; 42 CFR §482.23, 2011; 42 CFR §416.46, 2007).

V. Patient information must be secure, held confidential, and protected from unauthorized disclosure (Health Insurance Portability and Accountability Act of 1996, 1996).
VI. Modifications to existing content in the patient health care record should comply with federal and state regulations, health care accreditation requirements, and national practice guidelines ("ANA principles," 2010; Foundation of Research and Education of AHIMA, 2005).
VII. Perioperative personnel should receive initial and ongoing education and competency verification on their understanding of the principles and performance of the processes for documenting patient care and of best practices for maintaining the security of patient care information ("ANA principles," 2010; Medical records, 2008; Bredfeldt et al., 2013).
VIII. Policies and procedures for perioperative information management should be developed, reviewed periodically, revised as necessary, and readily available in the practice setting. As new evidence emerges, policies and procedures should evolve to accommodate best practices and technology developments (Clark et al., 2013).
IX. A quality management program should be developed and implemented, and should focus on the integrity of the data within the patient health care record (Clark et al., 2013).

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Any condition requiring surgery or other invasive procedures

Guideline Category

Management

Clinical Specialty

Nursing

Surgery

Intended Users

Advanced Practice Nurses

Hospitals

Nurses

Guideline Objective(s)

To provide guidance to assist perioperative nurses in documenting and managing patient care information within the perioperative practice setting

Target Population

Patients undergoing surgical and other invasive procedures

Interventions and Practices Considered

1. Maintaining a perioperative patient health care record that comprehensively reflects the plan of care
2. Synchronizing the perioperative nursing documentation with the nursing workflow
3. Use of structured vocabularies in the electronic perioperative nursing documentation
4. Meeting professional and regulatory compliance requirements in the perioperative nursing documentation
5. Ensuring that patient information is secure and held confidential
6. Complying with federal and state regulations, health care accreditation requirements, and national practice guidelines when making modifications to the existing patient health care record
7. Initial and ongoing education and competency verification of perioperative personnel on their understanding of the principles and performance of the processes for documenting patient care and for maintaining the security of patient care information
8. Development and continued review and maintenance of policies and procedures for perioperative information management
9. Development and implementation of quality management programs focusing on the integrity of the data within the patient health care record

Major Outcomes Considered

- Quality and quantity of data documentation
- Percentage of charts with complete and accurate documentation and medication orders
- Effectiveness of nursing interventions toward attaining desired patient outcomes

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Evidence Review

A medical librarian conducted a systematic search of the databases MEDLINE®, CINAHL®, and the Cochrane Database of Systematic Reviews. The librarian also conducted a non-systematic search of the Scopus® database. Results were limited to literature published in English from January 2011 to June 2015. During the development of the guideline, the lead author requested additional articles that either did not fit the original search criteria or were discovered during the evidence appraisal process, and the lead author and the medical librarian identified relevant guidelines from government agencies and standards-setting bodies. At the time of the initial search, the librarian established weekly alerts on the search topics and until October 2015, presented relevant alert results to the lead author.

Search terms included the subject headings and keywords *medical informatics, nursing informatics, documentation, information management, medical records, electronic health records, computerized patient records, information storage and retrieval, forms and records control, computer-assisted decision making, operating room information systems, hospital information systems, health information exchange, clinical decision support systems, interoperability, systems integration, data mining,* and *informed consent*. The concepts of standardized terminologies were included with a broad subject-heading controlled vocabulary as well as individual headings and keywords for relevant standardized terminologies. Subject headings and keywords related to government regulations included *government regulation, meaningful use, Health Insurance Portability and Accountability Act, HIPAA, Health Information Technology for Economic and Clinical Health, American Recovery and Reinvestment Act, Affordable Care Act,* and *Medicare and Medicaid Electronic Health Care Record*. The keywords *big data, electronic signature, charting by exception, variance charting, electronic medical record, EHR, Health Level Seven International, HL7,* and *EMR* also were included in the search, as were terms related to the concepts of data collection, retention, storage, and governance.

Inclusion and Exclusion Criteria

Inclusion criteria were research and non-research literature in English, complete publications, and relevance to the key questions.

Excluded were non-peer-reviewed publications and evidence from other disciplines when evidence from the perioperative setting was available. Low-quality evidence was excluded when higher quality evidence was available, and literature outside the time restriction was excluded when literature within the time restriction was available.

Number of Source Documents

In total, 740 research and non-research sources of evidence were identified for possible inclusion, and of these, 274 were cited in the guidance document. See Figure 1 in the original guideline document for a flow diagram of literature search results.

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

I: Randomized controlled trial (RCT) or experimental study, systematic review of all RCTs

II: Quasi-experimental study, systematic review of quasi-experimental studies or combination of quasi-experimental and RCTs

III: Non-experimental studies, qualitative studies, systematic review of non-experimental studies, combination of non-experimental, quasi-experimental, and RCTs, or any or all studies are qualitative

IV: Clinical practice guidelines, position or consensus statements

V: Literature review, expert opinion, case report, community standard, clinician experience, consumer experience, organizational experience (quality improvement, financial)

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Articles identified by the search were provided to the lead author and an evidence appraiser. The lead author and the evidence appraiser reviewed and critically appraised each article using the Association of periOperative Registered Nurses (AORN) Research or Non-Research Evidence Appraisal Tools, as appropriate. The literature was independently evaluated and appraised according to the strength and quality of the evidence. Each article was then assigned an appraisal score. The appraisal score is noted in brackets after each reference in the original guideline document, as applicable.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

The collective evidence supporting each intervention within a specific recommendation was summarized and the Association of periOperative Registered Nurses (AORN) Evidence Rating Model (see the "Rating Scheme for the Strength of the Recommendations" field) was used to rate the strength of the evidence. Factors considered in the review of the collective evidence were the quality of the evidence, the quantity of similar evidence on a given topic, and the consistency of the evidence supporting a recommendation. The evidence rating is noted in brackets after each intervention in the original guideline document.

Rating Scheme for the Strength of the Recommendations

1: Strong Evidence: Interventions or activities for which effectiveness has been demonstrated by high quality evidence from rigorously-designed studies, meta-analyses, or systematic reviews, or rigorously-developed clinical practice guidelines

- Evidence from a meta-analysis or systematic review of research studies that incorporated evidence appraisal and synthesis of the evidence in the analysis
- Supportive evidence from a single well-conducted randomized controlled trial (RCT)
- Guidelines that are developed by a panel of experts, that derive from an explicit literature search methodology, and include evidence appraisal and synthesis of the evidence

1: Regulatory Requirement: Federal law or regulation

2: High Evidence: Interventions or activities for which effectiveness has been demonstrated by evidence from:

- Good quality systematic review of RCTs
- High quality systematic review in which all studies are quasi-experimental or a combination of RCTs and quasi-experimental studies
- High quality quasi-experimental study
- High quality systematic review in which all studies are non-experimental or include a combination of RCTs, quasi-experimental, and non-experimental studies. Any or all studies may be qualitative.
- High quality non-experimental studies
- High quality qualitative studies
- Good quality clinical practice guideline, consensus or position statement

3: Moderate Evidence: Interventions or activities for which the evidence has been demonstrated by evidence from:

- Good quality systematic review in which all studies are quasi-experimental or a combination of RCTs and quasi-experimental studies
- Good quality quasi-experimental study
- High or good quality literature review, case report, expert opinion, or organizational experience

4: Limited Evidence: Interventions or activities for which there are currently insufficient evidence or evidence of low quality

- Supportive evidence from a poorly conducted research study
- Evidence from non-experimental studies with high potential for bias
- Guidelines developed largely by consensus or expert opinion
- Non-research evidence with insufficient evidence or inconsistent results
- Conflicting evidence, but where the preponderance of the evidence supports the recommendation

5: Benefits Balanced with Harms: Selected interventions or activities for which the Association of periOperative Registered Nurses (AORN) Guidelines Advisory Board is of the opinion that the desirable effects of following this recommendation outweigh the harms

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

The Guideline for Patient Information Management has been approved by the Association of periOperative Registered Nurses (AORN) Guidelines Advisory Board. It was presented as a proposed guideline for comments by members and others. The guideline is effective July 1, 2016.

Evidence Supporting the Recommendations

References Supporting the Recommendations

42 CFR Â§482. Conditions of participation for hospitals. Baltimore (MD): Centers for Medicare & Medicaid Services, Department of Health and Human Services; 2011 Oct 1.

42 CFR Â§482.24. Condition of participation: medical record services. Baltimore (MD): Centers for Medicare & Medicaid Services, Department of Health and Human Services; 2011 Oct 1.

42 CFR Â§416.46. Condition for coverage - nursing services. Baltimore (MD): Centers for Medicare & Medicaid Services, Department of Health and Human Services; 2007 Oct 1.

42 CFR Â§416.47. Condition for coverage - medical records. Baltimore (MD): Centers for Medicare & Medicaid Services, Department of Health and Human Services; 2007 Oct 1.

42 CFR Â§482.23. Condition of participation: nursing services. Baltimore (MD): Centers for Medicare & Medicaid Services, Department of Health and Human Services; 2011 Oct 1.

ANA principles for documentation. Silver Spring (MD): American Nurses Association (ANA); 2010.

Better EHR: usability, workflow and cognitive support in electronic health records. Houston (TX): National Center for Cognitive Informatics & Decision Making; 2014.

Bredfeldt CE, Awad EB, Joseph K, Snyder MH. Training providers: beyond the basics of electronic health records. BMC Health Serv Res. 2013 Dec 02;13:503. PubMed

Clark JS, Delgado VA, Demorsky S, Dunagan EA, Eichelmann TA, Hooper LA, Landsbach G, Meehan AM, Neville DL, Nunn SL. Assessing and improving EHR data quality (updated). J AHIMA. 2013 Mar;84(3):48-53. PubMed

Colligan L, Potts HW, Finn CT, Sinkin RA. Cognitive workload changes for nurses transitioning from a legacy system with paper documentation to a commercial electronic health record. Int J Med Inform. 2015 Jul;84(7):469-76. PubMed

Foundation of Research and Education of AHIMA. Update: maintaining a legally sound health record--paper and electronic. J AHIMA. 2005 Nov-Dec;76(10):64A-64L. PubMed

HÃ¤yrinen K, Lammintakanen J, Saranto K. Evaluation of electronic nursing documentation--nursing process model and standardized terminologies as keys to visible and transparent nursing. Int J Med Inform. 2010 Aug;79(8):554-64. PubMed

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Kim H, Dykes P, Mar P, Goldsmith D, Choi J, Goldberg H. Towards a standardized representation to support data reuse: representing the ICNP semantics using the HL7 RIM. Stud Health Technol Inform. 2009;146:308-13. PubMed

Lee S, McElmurry B. Capturing nursing care workflow disruptions: comparison between nursing and physician workflows. Comput Inform Nurs. 2010 May-Jun;28(3):151-9; quiz 160-1. PubMed

Lundberg C, Warren J, Brokel J, et al. Selecting a standardized terminology for the electronic health record that reveals the impact of nursing on patient care. Online J Nurs Inform. 2008;12(2)

Medical records. Oper Room Risk Manag. 2008;1:Medical Records 3.

Nursing: scope and standards of practice. Silver Spring (MD): American Nurses Association (ANA); 2010.

Peterson AM. Medical record as a legal document part 2: meeting the standards. J Legal Nurse Consult. 2013;24(1):4-10.

Standards of perioperative nursing. In: Guidelines for Perioperative Practice. Denver (CO): AORN, Inc; 2015. p. 693-708.

Whittenburg L. Workflow viewpoints: Analysis of nursing workflow documentation in the electronic health record. J Healthc Inf Manag. 2010;24(3):71-5. PubMed

Type of Evidence Supporting the Recommendations

The literature was independently evaluated and appraised according to the strength and quality of the evidence. Each article was then assigned an appraisal score. The appraisal score is noted in brackets after each reference in the original guideline document, as applicable. Also see the original guideline document for the systematic review and discussion of evidence.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Highly reliable data will be collected to chronicle the patient's response to nursing interventions and demonstrate the health care organization's progress toward improving health care outcomes.
- Refer to the original guideline document for additional discussion of potential benefits of specific interventions.

Potential Harms

Not stated

Qualifying Statements

Qualifying Statements

- These recommendations represent the Association's official position on questions regarding optimal perioperative nursing practice.
- No attempt has been made to gain consensus among users, manufacturers, and consumers of any material or product.
- Compliance with the Association of periOperative Registered Nurses (AORN) guideline is voluntary.
- AORN's recommendations are intended as achievable and represent what is believed to be an optimal level of patient care within surgical and invasive procedure settings.
- Although they are considered to represent the optimal level of practice, variations in practice settings and clinical situations may limit the degree to which each recommendation can be implemented.
- AORN recognizes the many diverse settings in which perioperative nurses practice; therefore, this guideline is adaptable to all areas where operative or other invasive procedures may be performed
- This document should be viewed as a conceptual outline that can be used to create a comprehensive documentation platform. It is not

inclusive of all documentation elements, nor should it be seen as the only guideline that may be used when developing or revising a clinical documentation system.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Mobile Device Resources

Resources

Staff Training/Competency Material

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2016 Jul

Guideline Developer(s)

Association of periOperative Registered Nurses - Professional Association

Source(s) of Funding

Association of periOperative Registered Nurses (AORN)

Guideline Committee

Association of periOperative Registered Nurses (AORN) Guidelines Advisory Board

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Financial Disclosures/Conflicts of Interest

No financial relationships relevant to the content of this guideline have been disclosed by the authors, planners, peer reviewers, or staff.

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Guideline Availability

Available to subscribers from the Association of periOperative Nurses Web (AORN) site .

Print copies: Available for purchase from the AORN Web site .

Availability of Companion Documents

The following is available:

- Evidence table. Guideline for patient information management. 2016 Jul. 24 p. Available from the Association of periOperative Nurses (AORN) Web site .

Additional implementation tools, including clinical FAQs, online learning modules, videos and community discussions, are available from the AORN Web site .

Documents related to the evidence rating model, hierarchy of evidence, and expanded appraisal tools are available from the AORN Web site .

In addition, an AORN Guidelines for Perioperative Practice eBook mobile app is available from the AORN Web site .

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on March 7, 2017. The information was not verified by the guideline developer.

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